

grain to grain contact of non-deformable particulates. *See*, for instance, the illustration of FIG. 5. *Note* that the non-deformable proppant consist of a hard core which is surrounded by the substantially deformable material.

The “ceramics” of *Rickards* relate to the non-deformable core (col. 10, ll. 1-16). *Rickards* does not indicate, however, that the ceramic (or any other material for the hard non-deformable core) is porous. In fact, the ceramics referenced in col. 10, ll. 12 of *Rickards* are the “comparison materials” in the Examples of Applicants. *Note*, p. 31, ll. 19-20 of Applicants’ specification. Thus, *Rickards* does not disclose the use of a core material which is porous, much less a core material which exhibits the inherent or induced porosity of the porous particulates of the claims of Applicants. In light of the inherent or induced porosity of the porous particulates, fluids are capable of at least partially moving through interconnected pore spaces.

Independent Claims 106, 161, 169 and 180 of Applicants recite a selectively configured porous particulate wherein the apparent specific gravity (ASG) of the selectively configured porous particulate material is less than the ASG of the porous particulate material. The Examiner’s rejection is premised on the erroneous conclusion that the materials set forth in the claims of Applicants are the same materials disclosed in *Rickards*. However, the particulate materials of *Rickards* are not porous. The interconnected porosity of the particulates of Applicants permits encapsulation or entrapment of air or lightweight fluid in the pores of the particulate material. The claimed physical property of Claim 106 may be attributable to the open-celled porosity.

Further, references to “porosity” in *Rickards* (e.g., col. 7, l. 38; col. 8, 12; col. 17, l. 27; and col. 18, ll. 34-35) relate to the porosity of the proppant pack. The referenced porosity in the claims of Applicants relates to the porosity of the particulate. The ASG of the proppant pack of *Rickards* would not be less than the ASG of the deformable particulate because the deformable particulate in *Rickards* fills the porous spaces *in between* the hard non-deformable particulates.

Likewise, independent Claim 130 is neither anticipated by nor rendered obvious over *Rickards*. Claim 130 is directed to a *particulate*, not a proppant *pack*. *Rickards* does not disclose the claimed materials which define the selectively configured porous particulate. The claimed properties of Claim 130 would not therefore be “inherently taught” in *Rickards*.

Claim 137 recites treatment or modification of a porous particulate material having inherent or induced permeability with a glazing material. In addition to the deficiencies

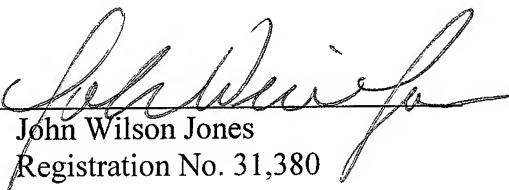
referenced above, *Rickards* further fails to disclose a glazing material.

Examiner's Rejection on the Ground of Double Patenting. The Examiner has rejected Claims 106-110, 112, 114-116, 119, 121-131, 135-140, 142, 144, 145, 150-154 and 160-180 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 97 of *Rickards*. This ground of rejection is also traversed.

Claim 97 of *Rickards* specifically recites a portion of the deformable particulates in the pack being “a core component of substantially non-deformable material surrounded by at least one layer component of substantially deformable material.” As stated *supra*, the deformable particulates of *Rickards* are not proppant. The proppant in *Rickards* is the substantially non-deformable material. The combination of deformable particulate and substantially non-deformable material would not exhibit the claimed physical properties of Applicants as discussed *supra*.

Conclusions. The Examiner is respectfully requested to telephone the undersigned should he deem it useful to expedite the prosecution of this application and issuance of a Notice of Allowance.

Respectfully submitted,



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